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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/730,346

12/08/2003

Edward Russell Cox

P148

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THE PROCTER & GAMBLE COMPANY  
Global Legal Department - IP  
Sycamore Building - 4th Floor  
299 East Sixth Street  
CINCINNATI, OH 45202

EXAMINER

MATTISON, LORI K

ART UNIT

PAPER NUMBER

1619

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/730,346	<b>Applicant(s)</b> COX ET AL.	
	<b>Examiner</b> LORI K. MATTISON	<b>Art Unit</b> 1619	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 1/10/2011.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7,9-11 and 55-59 is/are pending in the application.
- 4a) Of the above claim(s) 55-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7 and 9-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                         | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### **Response to Amendments/Arguments**

1. Applicant's arguments and amendments to claim 1 filed 1/10/2011 are acknowledged and have been fully considered. Any rejection and/or objection not specifically addressed below in original or modified form is herein withdrawn.
2. Claims 1, 2, 4-7, 9-11, and 55-59 are pending, claims 3, 8, and 12-54 are cancelled, claims 55-59 remain withdrawn for the reasons of record and claims 1, 2, 4-7, and 9-11 have been examined on the merits.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 4-7, and 9-11 **remain** rejected under 35 U.S.C. 103(a) as being unpatentable over NATURAL BALANCE in view of HALE as published in the Journal of Veterinary Dentistry in 1998, US Patent No. 5,094,870 (SCAGLIONE, 1992), DOGS HEALTH as published on 9/20/2002, ROYAL CANIN DRY DOG FOOD published on 8/15/2003, DRY DOG FOOD as published on 7/12/2002, and Merck Veterinary Manual 8th Edition (See PTO-892 mailed on 9/04/2008)

**Claim Summary:** The claims are generally to a composition which comprises a soluble mineral component which comprises two or more minerals, a source of protein and a phosphate component. The soluble mineral and the phosphate components are present in an amount effective for use as an oral medicament. The soluble mineral and phosphate components coat the surface of the edible composition also comprises a nutritionally balanced dog food or cat food. The soluble mineral component and the phosphate component are also integrated into the dog food composition. The claims further define the amount and type soluble mineral component.

NATURAL BALANCE teaches a dry dog food (see entire document and especially page 1 of 2, paragraph 1; instant claim 1). The dog food comprises a protein source from lamb meal (see entire document and especially page 1 of 2, paragraph 2; instant claim 1) and a soluble mineral component which comprises manganese sulfate (instant claim 6), zinc sulfate (instant claim 6), and copper sulfate (instant claims 6 and 11; see entire document and especially page 1 of 2, last paragraph). NATURAL BALANCE teaches that food is complete and balanced nutrition for all life stages (see entire document and especially "General", page 2 of 2, last paragraph). Thus, one of ordinary skill in the art would recognize that the soluble mineral component is present in an amount effective for use as an oral medicament against malnutrition. One of ordinary skill would also recognize that the soluble mineral component is incorporated

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into the matrix of the dry dog food composition since the dry dog food does not comprise a coating.

NATURAL BALANCE does not teach a phosphate component, which is a pyrophosphate as set forth by instant claims 1, 9, and 10.

NATURAL BALANCE does not teach that the soluble mineral and the phosphate components are coated on the surface of the composition as set forth by instant claims 1 and 4.

NATURAL BALANCE does not teach the percentages of manganese, zinc, or copper and the percentages of these mineral components by weight of the composition as recited by claims 2, 5, and 7.

HALE teaches that the incidence of dental caries in dogs is approximately 5.3% (abstract).

SCAGLIONE teaches a dog biscuit that comprises an inorganic pyrophosphate. SCAGLIONE teaches that inorganic pyrophosphate component of the biscuit reduces the accumulation of tartar on the teeth of dogs (see entire document and especially column 7, lines 25-40). SCAGLIONE goes on to teach that through the prevention of formation of tartar, the dog biscuit has an anti-cariogenic agent effect because the microorganisms which are present in the organic portion of tartar are no longer present to produce acids to eat away at the enamel (see entire document and especially column 1, lines 30-35; column 7, lines 25-50). SCAGLIONE teaches that this anti-tartar and anti-cariogenic effect is achieved through the process of eating and chewing dog biscuits (i.e. dog food) which contain pyrophosphates by the dogs (see entire document and especially column 4, lines 10-30). SCAGLIONE further teaches a process for preparing dog biscuit dough which comprises admixing an inorganic pyrophosphate and the

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other ingredients of the dog biscuit (see entire document and especially column 4, lines 30-35; Table 1, Example 2-column 14). SCAGLIONE explicitly teaches that the dough of the dog biscuit contains the inorganic phosphate component (see entire document and especially column 7, lines 30-35). SCAGLIONE teaches that pyrophosphate (i.e. polyphosphate) is a soluble phosphate (see entire document and especially column 3, lines 5-10).

DOGS HEALTH teaches that sodium tripolyphosphate removes tartar buildup from the teeth of dogs when used in a dog treat (see entire document and especially page 1 of 4, column 2, paragraph 2).

ROYAL CANIN DRY DOG FOOD demonstrates that the anti-tartar agents, in particular sodium tripolyphosphate, have been included in dry dog food since at least 2003 (see entire document and especially page 2 of 5, column 1, paragraph 1).

DRY DOG FOOD teaches Nature's Variety Prairie dry dog food (page 4 of 6, box 2). This dry dog food is "bio-coated" to increase enzymes, unaltered bio-available amino acids, essential fatty acids, vitamins, and minerals that would otherwise be degraded during processing (page 4 of 6, box 2).

The MERCK VETERINARY MANUAL 8<sup>TH</sup> EDITION teaches that the minimum nutrient requirement for dogs for zinc, manganese, and copper is 0.012% (instant claims 2 and 7), 0.0005% (i.e. "about 0.001% by weight"; instant claims 2 and 7), and 0.00073% (instant claims 2 and 5) respectively by weight (page 1626). The sum of these percentages is 0.013% (page 1626). MERCK teaches that the AAFCO guidelines for the amount of zinc present in the composition is optimizable with the amount of zinc required ranging from is 0.012% - 0.1 % by weight (page 1626). MERCK also teaches that the AAFCO guidelines for the amount of copper

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present in the composition is optimizable with the amount of copper required ranging from 0.00073% -0.025% by weight of the composition (page 1626). Therefore the amount of the recited minerals can range from 0.01323-0.1255% (page 1626; i.e. at least about 0.02% of mineral component; instant claim 5).

With regard to instant claims 1, 9, and 10, it would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made to have modified the dog food composition taught by NATURAL BALANCE by adding pyrophosphate to the matrix of the dog food composition. One would have been motivated to do so in order to prevent cavities in the teeth of dogs by removing the tartar in which cavity causing microorganisms reside as taught by the combined teachings of HALE and SCAGLIONE. The skilled artisan would have had a reasonable expectation of success in doing so because pyrophosphate is functionally equivalent to sodium tripolyphosphate which is also utilized in dog biscuits/treats and dry dog food as taught by the combined teachings of DOGS HEALTH and ROYAL CANIN DRY DOG FOOD. The artisan of ordinary skill would have had further expectation of success because it was previously known to add pyrophosphate to the ingredients of a dog biscuit in order to provide an anti-tartar and an anti-cariogenic effect which occurs through the mechanical action of chewing and eating the dog biscuit by the dog as taught by SCAGLIONE. With regard to the effective amount of pyrophosphate to add, the adjustment of particular conventional working conditions (e.g. determining result effective amount of pyrophosphate taught by SCAGLIONE) is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the ordinary artisan with said artisan recognizing inclusion of pyrophosphate as an anti-tartar and anti-cavity agent as taught by SCAGLIONE.

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With regard to instant claims 1 and 4, it would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made to have modified the structure of the dry dog food composition taught by the combined teachings of NATURAL BALANCE, HALE, SCAGLIONE, DOGS HEALTH and ROYAL CANIN DRY DOG FOOD by coating a portion (i.e. at least 50 % of the mineral and phosphate components) of the manganese sulfate, zinc sulfate, copper sulfate, and pyrophosphate components of the composition in a bio-coating around the dry kibble as taught by DRY DOG FOOD. The skilled artisan would have been motivated to do so in order to replace and supplement any of the minerals and vitamins that have been lost from the dog food during processing. One would have had a reasonable expectation of success in doing so because DRY DOG FOOD teaches a commercially available dry dog food in which the vitamin and mineral components are bio-coated onto the dog food. Thus, it is within the skill and resources of an ordinary artisan to provide a dry dog food in which the dry food has been coated with vitamins and minerals.

With regard to instant claims 2, 5, and 7, the adjustment of particular conventional working conditions (e.g. determining result effective amounts of the manganese, copper, and zinc taught by the combined references of NATURAL BALANCE and MERCK to yield a composition comprising 0.02 wt. % soluble mineral component) is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the ordinary artisan with said artisan recognizing that dogs have nutritional requirements to achieve optimal health which involve inclusion of zinc, copper, and manganese ions in their diet in the range of percentages taught by MERCK.



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A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. (In re Opprecht 12 USPQ 2d 1235, 1236 (Fed Cir. 1989); In re Bode 193 USPQ 12 (CCPA) 1976). In light of the foregoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a). From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

#### REMARKS

In the traverse of the rejection of claims 1,2, 4-7, and 9-11 under 35 USC 103(a) over Natural Balance in view of Hale, Scaglione, Dogs Health, Royal Canin Dry Dog Food, Dry Dog Food, and Merck, Applicant alleges that the instant claims now recited that at least a portion of **both** the soluble mineral component and the phosphate component are integrated within the each of the composition and coated on the surface of the composition (Reply, page 5, paragraph 5). Applicant alleges that the references fail to teach or suggest this arrangement (Reply, page 6, last paragraph).

In response, it is observed that each of NATURAL BALANCE, SCAGLIONE, and ROYAL CANIN DRY DOG FOOD teach inclusion of soluble minerals and/or phosphates in the dry food component of the dog food (i.e. the soluble minerals and phosphates are taught by the three references as being integrated within the composition). DRY DOG FOOD teaches a dog food with a bio-coating to increase enzymes, unaltered bio-available amino acids, essential fatty

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acids, vitamins, and minerals that would otherwise be degraded during processing. Since it is recognized that a portion of the minerals are lost in the processing of the dog food composition, it would have been prima facie obvious to one of ordinary skill in the art to have added a bio-coating (which comprises minerals and phosphates) to replace the minerals and phosphates that have been lost during processing. One would have been motivated to do so in order to ensure that the dog receives about 100% of the recommended daily allowance of vitamins and minerals needed for good health.

### **Conclusion**

No claims are allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LORI K. MATTISON whose telephone number is (571)270-5866. The examiner can normally be reached on 8am-6pm (Monday-Thursday).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID BLANCHARD can be reached on (571)272-0827. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LORI K MATTISON/  
Examiner, Art Unit 1619

/SHANON A. FOLEY/

Primary Examiner, Art Unit 1619